CLAIMS

1. A catalyst comprising a γ-alumina support coated with a first layer containing magnesium and, on the first layer, a second layer containing copper and, optionally, lithium.

2. A catalyst as claimed in claim 1 containing, by weight, from 0.1 to 5% magnesium, from 2 to 10% copper, and from 0 to 5% lithium.

3. A catalyst as claimed in claim 2 containing, by weight, from 0.1 to 2% magnesium, from 2 to 8% copper, and from 0 to 1% lithium.

4. A catalyst as claimed in claim 3 containing, by weight, 0.5 to 1.5% magnesium, from 3 to 6% copper, and from 0.1 to 0.3% lithium.

5. A catalyst as claimed in any of claims 1 to 4 wherein the γ-alumina has a surface area of from 50 to 220 m^2/g and an average particle size in the range 40 to 60 μm.

6. A catalyst as claimed in claim 5 wherein the γ-alumina has a surface area of from 80 to 180m^2/g.

7. A process for preparing a catalyst which comprises impregnating γ-alumina with a solution containing a magnesium salt, drying the product, and impregnating the product with a solution containing a copper salt and, optionally, a lithium salt.

8. A process as claimed in claim 7 wherein the salts are the chloride salts.

9. A catalyst produced by the process of claim 7 or 8.

10. A process for the catalytic gas phase oxychlorination of ethylene which comprises reacting ethylene, hydrogen chloride and a source of oxygen in the presence of a catalyst as claimed in any of claims 1 to 6 and 9.

CLAIMS

1. A process for preparing a catalyst which comprises impregnating γ-alumina with a solution containing a magnesium salt, drying the product, and impregnating the product with a solution containing a copper salt and, optionally, a lithium salt.

2. A process as claimed in claim 1 wherein the salts are the chloride salts.

3. A catalyst produced by the process of claim 1 or 2.

4. A catalyst as claimed in claim 3 containing, by weight, from 0.1 to 5% magnesium, from 2 to 10% copper, and from 0 to 5% lithium.

5. A catalyst as claimed in claim 4 containing, by weight, from 0.1 to 2% magnesium, from 2 to 8% copper, and from 0 to 1% lithium.

6. A catalyst as claimed in claim 5 containing, by weight, 0.5 to 1.5% magnesium, from 3 to 6% copper, and from 0.1 to 0.3% lithium.

7. A catalyst as claimed in any of claims 3 to 6 wherein the γ-alumina has a surface area of from 50 to 220 m^2/g and an average particle size in the range 40 to 60 μm.

8. A catalyst as claimed in claim 7 wherein the γ-alumina has a surface area of from 80 to 180m^2/g.

9. A process for the catalytic gas phase oxychlorination of ethylene which comprises reacting ethylene, hydrogen chloride and a source of oxygen in the presence of a catalyst as claimed in any of claims 3 to 8.

Added